

Abstract

A “lazy commit” allows database transactions to be committed faster by not waiting for log records of the transaction to be written to disk. When a system crash occurs during the commit process, transactions may be lost because the log data is not available to recreate the transaction. While lazy commits speed up processing, they also increase the potential for data inconsistency. This invention introduces the concept of “durable reads”—transactions that require isolation from lazy commit transactions and which must be guaranteed to read only durably committed data. When durable read transaction attempts to read data changed by a lazy commit transaction, the system ensures the lazy commit transaction’s changes are first made durable.